

A SUMMARY REPORT OF THE
EXCAVATIONS AT ALLIGATOR CREEK

CONDUCTED FOR THE U.S. FOREST SERVICE

A Summary Report of the
Excavations at
Alligator Creek, Charleston County, S.C.

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INTRODUCTION

During the summer of 1981 Forest Service Archaeologist Martha Zierden (assigned to the Francis Marion National Forest) surveyed the portion of the south bank of Awendaw Creek which comprises Compartment 199 of the Francis Marion National Forest. This survey separately published by the Forest Service, identified 37 archaeological sites, 33 with prehistoric components (Zierden 1982). The extant environmental setting of the project area is described by Zierden (1982:22-23) and additional information may be found in Trinkley (1981a, 1981b).

One of the more significant prehistoric sites surveyed by Zierden was the Alligator Creek site, originally recorded by Mr. Donald MackIntosh in the early 1960s. This site, identified as 38Ch49 by the Institute of Archaeology and Anthropology and SoC^V528 by the Research Laboratories of Anthropology, is situated on the east bank of a small fresh water tributary of Awendaw Creek, known locally as Alligator Creek (Figure 1). The site is estimated to cover an area of about 1000 feet parallel to the creek and 200 to 300 feet east-west. The bulk of the material appears to be found on a sandy ridge parallel to the creek.

MackIntosh collected the site, which he designated AL BR and AL BR-S, for several years, during which time he recovered several hundred sherds and at least two projectile points (Institute of Archaeology and Anthropology collections, 38Ch49-DM-1, 2). The collection activities were facilitated by the Forest Service's use of the southern two-thirds of the site as a borrow pit. Borrow activities ceased in the early 1970s and the area was allowed to revegetate, although no attempt was made to stabilize the unconsolidated sandy soils. Consequently, erosion remains active. This erosion, coupled with the recent plowing of two fire lanes, allowed Zierden to recover over 100 sherds from the surface.

A preliminary examination of the MackIntosh collection revealed significant quantities of Early Woodland pottery, primarily of the Refuge and Deptford Series (Williams 1968:198-208, Caldwell and Waring 1939). The collections were intriguing because of the obvious typological gradation from Thom's Creek to Refuge to Deptford, particularly in the undecorated pottery. These original observations were again made after examining Zierden's collection. The ceramic assemblage strongly suggested a site intermittently occupied from about 1200 B.C. to A.D. 500 which might be able to provide data on the evolution of the Early Woodland Refuge Series. It was also hoped that the site's integrity was not too badly damaged and that Early Woodland features might be found. This view was tempered, however, by previous excavations at a Deptford Phase site in Lexington County, South Carolina (Trinkley 1980a) which discovered extensive leaching. Excavations at the Alligator Creek site were conducted by the author and Ms. Zierden as a supplement to the Forest Service survey of several compartments (Zierden 1982).

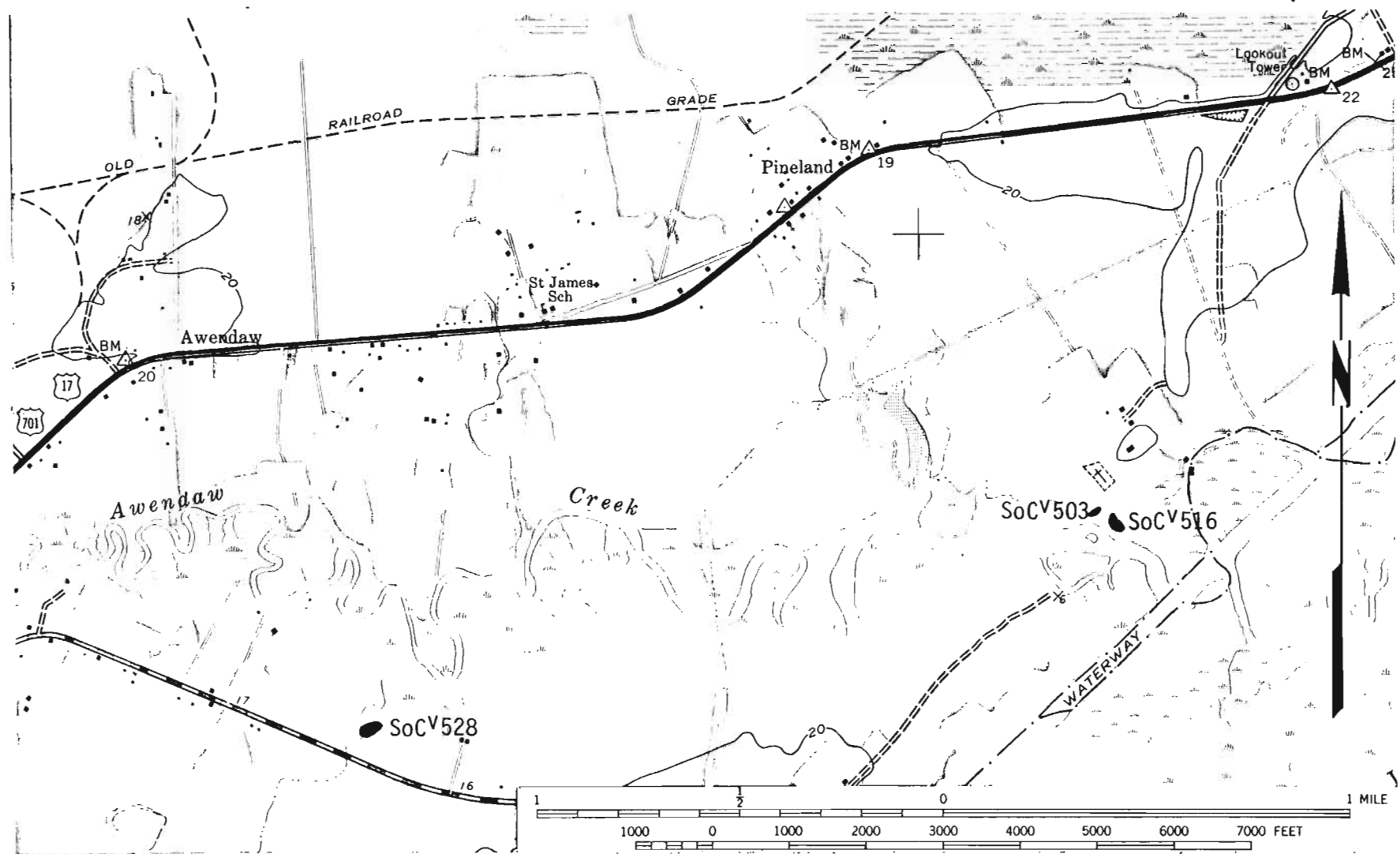


Figure 1. Vicinity of Alligator Creek (SoC^V528), Walnut Grove (SoC^V516) and Awendaw Creek midden (SoC^V503).

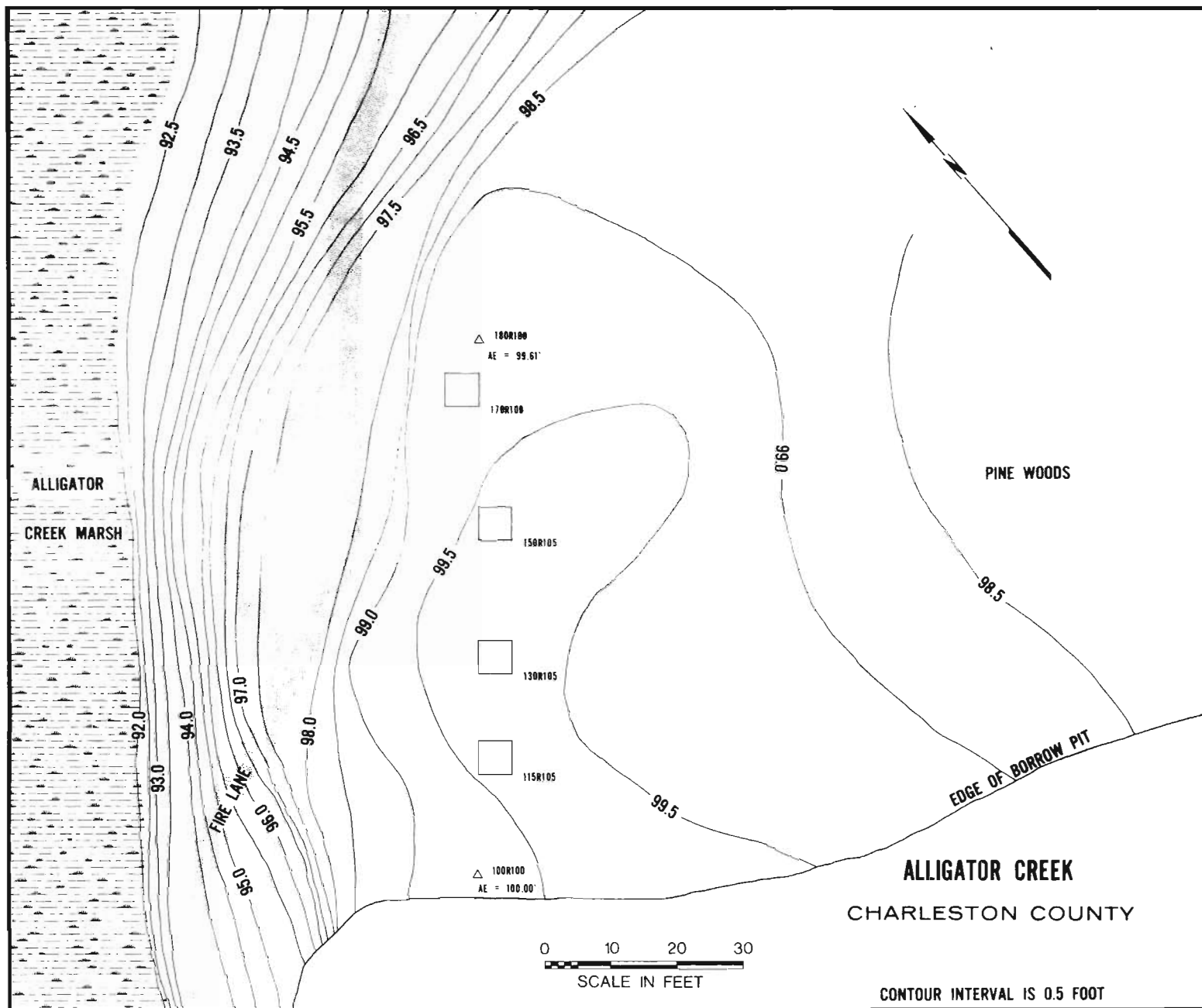


Figure 2. Contour map of the Alligator Creek site.

THE EXCAVATIONS

Excavations at Alligator Creek were conducted on August 6 through 8, 1981 with assistance provided by Ranger John Pryor and Forester Eddie Stroman. A total of 39 man hours were spent excavating four 5 foot squares (130 cubic feet of soil were excavated and screened and over 330 artifacts were recovered).

A grid was established for the site with permanent pins buried at 100R100 and 180R100. The R100 line is roughly parallel to the Alligator Creek marsh to the east and is set at a magnetic bearing of N41E. A contour map of the site area outside the borrow pit was made with a 0.5 foot contour interval (Figure 2). This map clearly shows the natural sand ridge or crest parallel to the creek on which most of the pottery from outside the borrow pit has been collected. A series of four 5 foot test units were laid out at 115R105, 130R105, 150R105, and 170R100. These units, designated by the southeast corner, are tied into the site grid which uses the modified Chicago technique standardized by the Research Laboratories of Anthropology. The first number indicates feet north of the site datum (OR0) while the second number indicates feet right (or east) of this datum. Vertical control at the site is maintained by reference to the top of the iron pin at 100R100, which is assigned the arbitrary or assumed elevation of 100 feet. All soil was sifted through one-quarter inch mesh and the units were excavated in 0.4 foot levels (Plate 1).

The first squares excavated, 115R105 and 130R105, failed to reveal any clear archaeological stratigraphy. Geological stratigraphy is limited to a 0.2 foot humus zone overlying a yellow sand which has been leached tan. The transition from the humus to the basal sand is indistinct and variable in thickness. The tan to yellow sand grades into a white mottled sand at about 1.5 feet. Squares 150R105 and 170R100 revealed essentially the same soil zones (Plate 2). Because there did not appear to be any correlation between these soil zones and the archaeological materials, arbitrary levels of 0.4 foot were chosen for these preliminary test excavations. During future work at Alligator Creek it may be worthwhile to use 0.2 foot levels, although there has been such extensive disturbances and leaching that finer levels will probably fail to yield significantly clearer data.

Level 1 generally includes the humus and leaching zones. This level is extensively disturbed by recent activities, including logging, but does not exhibit any appreciable cultural material. This suggests that the humus development is recent, occurring after aboriginal occupation at the site and that the cultural levels are somewhat sealed. Levels 2 and 3 include the yellow or tan sand zone and it is from these levels that the majority of pottery was recovered. Level 4 begins to reveal the mottled white sand zone. Only one square, 115R105, had level 4 excavated because of time limitations, but this one square indicates that pottery will be found at least in the upper half of level 4. Excavations in 170R100, which terminated at the base of level 3, also suggest that pottery would have been abundant in level 4. No excavations were taken below level 4 so it is not possible to discount the possibility of earlier occupation levels, although no Archaic Period material was found in these excavations or in MackIntosh's surface collections from the



Plate 1. Excavation of square 130R105.

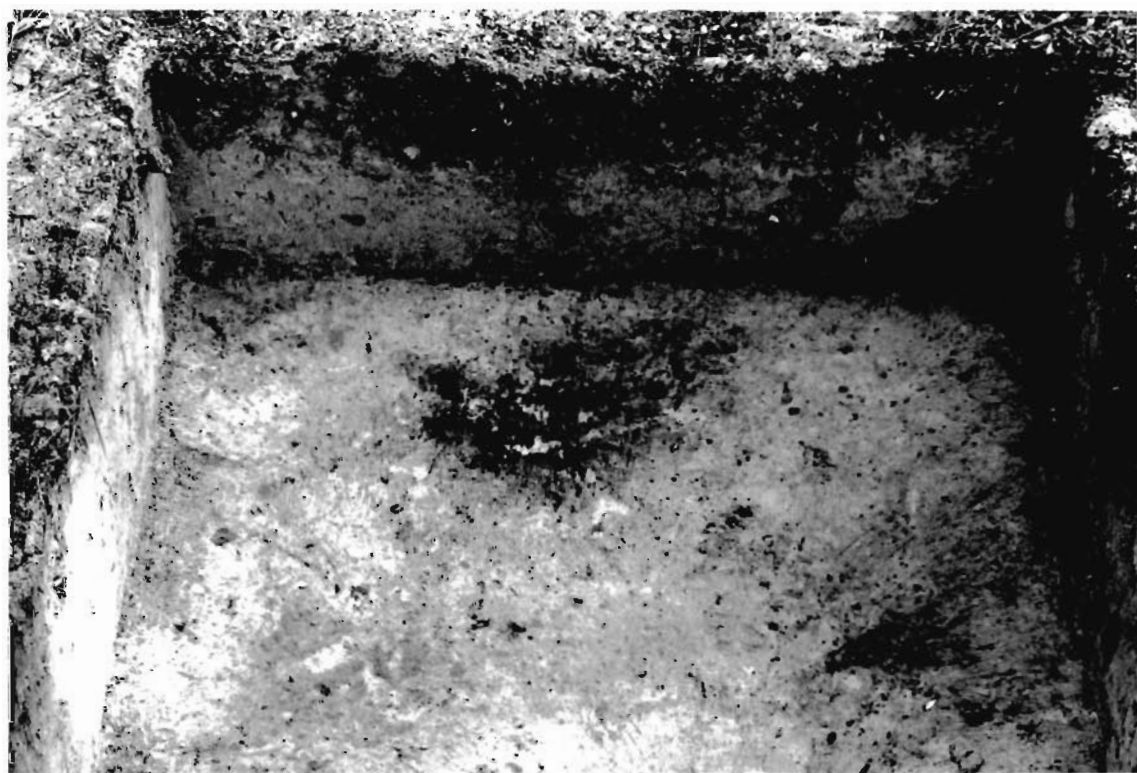


Plate 2. Square 115R105, top of level 5, view to the north.

borrow pit.

Several tree stains were observed during the excavations (see Plate 2), based on the quantity of charcoal and obvious organic stains. No aboriginal features were clearly observed during these excavations. Several sherd clusters, one in the southeast corner of 115R105 and another along the east profile of 170R100, may represent leached out pits. In neither case could a stain be observed either in plan or profile, nor did there appear to be any change in soil texture or compaction. This is not unexpected as the soils in the site vicinity are well drained and have rapid infiltration (Miller 1971:30). A similar leaching situation was observed in Lexington County, although the use of larger, contiguous excavation units allowed vague stains to be observed (Trinkley 1980a:26).

The limited excavation and sparse remains hinder any attempt to offer a synthesis of the site's development. It appears, however, that a series of sporadic, light occupations occurred at the site, perhaps because of the proximity to Alligator Creek, which today is flowing fresh water. The absence of any distinct archaeological strata emphasizes the site's irregular and short term use. The continuing soil development has effectively sealed the aboriginal occupation and to some degree has protected it from twentieth century disturbances. The lower soil zones, however, have been mixed by aboriginal occupation, normal soil erosion and deposition, and pedoturbation.

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ANALYSIS

The excavations at Alligator Creek recovered a small quantity of artifacts, almost all of which were sherds. The only other collected material consists of a small quantity of charcoal hand picked from various levels and soil samples. From previous surface collections a baked clay object and two projectile points have been recovered. Consequently, the bulk of this analysis will be concerned with the pottery and, specifically, will be concerned with the typological placement of the ceramics.

Three hundred thirty eight sherds were recovered from the excavations (Table 1) with the majority (184 sherds) coming from level 3. Because only one square was excavated through level 4 it is not possible to speculate on the sherd density below level 3. Four pottery series are found in the excavated collections, although two of these are minimally represented by single sherds. The Refuge Series accounts for 99% of the collected pottery. The surface collections evidence a similar emphasis on the Refuge Series (75% of the surface material), with minor amounts of Thom's Creek and Deptford pottery. The surface collection includes a larger collection of Deptford Series pottery than was found in the excavations, while Thom's Creek pottery was found only in the surface material. This suggests that while the site was occupied at several times during the Early Woodland these occupations were horizontally separated. Most of the site area has been destroyed with the portion remaining primarily an area of Refuge occupation.

Perhaps the most enigmatic pottery construct in the Carolinas is the Refuge Series, first discussed by Waring (Williams 1968:198-208). This series is characterized by a compact, sandy or gritty paste and a sloppy simple stamped, dentate stamped, or random punctate decoration. The type site for the Refuge Series is in the Savannah River National Wildlife Refuge, Jasper County, South Carolina (Williams 1968:198) and Waring felt this pottery was more common northward along the South Carolina coast than in Georgia. More recently sizable quantities of Refuge pottery have been found inland along the Savannah River (Peterson 1971a, 1971b) and even on the Georgia coast and inner coastal plain (DePratter 1979:115-116). Anderson's (1975:184) distributional study found a core of Refuge pottery in the interior of South Carolina, particularly along the Santee River, just inland from Alligator Creek.

Waring originally offered brief descriptions of four surface treatments -- simple stamped, dentate stamped, punctated, and incised (Williams 1968:200). To these DePratter (1979:122) has added Refuge Plain. Unfortunately, the Refuge Series has been consistently difficult to separate from both the preceding Thom's Creek Series and the succeeding Deptford Series. While Thom's Creek pottery has been conspicuously absent from Georgia coastal sites (see Williams 1968:255), Peterson (1971a:153) indicates that the Refuge Series paste is identical to that of the Thom's Creek Series. Only three differences were found between the Thom's Creek and Refuge Series (Peterson 1971a:153), including the addition of a deep olla form, the degeneration of linear punctations into a random motif (called Allendale Punctate by Stoltman [1974:276-277]), and the addition of a dentate stamp. Work by Trinkley (1976) indicates

		<u>Refuge</u>			<u>Deptford</u>		<u>Deep Creek</u>	<u>Hanover</u>	Totals
		Plain	Simple Stamped	residual	Plain	Linear Check Stamped	Fabric Impressed	residual	
115R105,	1	4							4
	2	13		5	1	1			20
	3	8		6					14
	4	10							10
130R105,	1		1	5					6
	2	16	1	12					29
	3	14	1	5					20
	cleaning	4							4
150R105,	1	2	1						3
	2	20	14	3			1	1	39
	3	60	38	12					110
	cleaning	11	3	2					16
170R100,	1								0
	2	13							13
	3	40							40
	cluster	5							5
	cleaning	5							5
Totals		225	59	50	1	1	1	1	338

Table 1. Pottery by square and level from the Alligator Creek excavations.

	Thom's Creek			Refuge				Deptford			
	Plain	Reed Punctate	Finger Pinched	Plain	Simple Stamped	Random Punctate	residual	Plain	Check Stamped	Geometric Stamped	Misc.
MackIntosh Collection											
AL-BR	2		1	40				10			
AL-BR S					4	8		6	18	1	2
USFS Collection		1	1	154	2		1	17	6	1	
Total	2	1	2	194	6	8	1	33	24	2	2

Table 2. Pottery from Alligator Creek surface collections.

that a deep olla form is present in the Thom's Creek Series, which leaves only the decoration to distinguish the Refuge Series. The linear punctations attributed to Refuge appear to be identical to the Thom's Creek pottery found in South Carolina. Because the linear Refuge punctate cannot typologically be separated from Thom's Creek, only the irregularly or randomly punctated type (see Stoltzman 1974:276-277) should be considered in the Refuge Series. Those sherds previously typed as Refuge Punctate, but which exhibit regular punctations, should be considered to belong in the Thom's Creek Series. Incising appears to be a decoration used on Thom's Creek, Refuge, and Deptford pottery. In no case does incising appear to represent a distinct type; rather it represents a decoration used on a number of different types belonging to each series. Consequently, "Refuge Incised" should be dropped from use.

The simple stamped motif has posed very serious problems, particularly in the attempt to separate those that have been called Thom's Creek (Phelps 1968:21), Mossy Oak (Griffin and Sears 1950), Refuge (Williams 1968:200), and Deptford (Griffin and Sears 1950). Peterson (1971a:165) discusses the trouble sorting Refuge and Deptford simple stamped pottery, which he solved by considering simple stamped sherds Deptford if they were found associated with check stamped pottery. Stoltzman (1974:22) solved the same problem by considering all simple stamped sherds Deptford.

Most of the problems surrounding Early Woodland simple stamped pottery can be traced to one of three sources -- imprecise typologies (such as that which resulted from Waring's work at the Refuge site), typologies based on incomplete data (for example, typological assessments made on the basis of too few sherds or made on the basis of mixed stratigraphy), and most fundamentally, a misunderstanding of the typological method. An examination of the variety in simple stamped pottery readily suggests that there is a continuum from the basically irregular, random stamping of Refuge to the regular, uniform stamping typical of Deptford. While it is possible to accurately type specimens from opposite poles of this continuum it is frequently difficult, if not impossible, to consistently sort those in the middle. The problem is accentuated by the attempt to deal with individual specimens or small collections. The description of the Thom's Creek Simple Stamped type developed by Phelps (1968) and the specimens he illustrates are fundamentally similar to Refuge Simple Stamped and probably fit into the Refuge end of this continuum.

The simple stamped pottery from Alligator Creek may be consistently typed as Refuge (Plate 3a). The bulk of the Refuge Simple Stamped pottery came from square 150R105 and from level 3. The paste is compact but usually friable, and is characterized by fine to medium sand. The interior and exterior color is usually a light yellowish brown, while the core is frequently a darker color evidencing incomplete oxidation. The light surface colors are probably the result of natural surface oxidation, similar to that noted by Anderson et al. (1979:73-74) from the Cal Smoak site in South Carolina. The interior of the Refuge pottery has been carefully smoothed with a moist, soft object, while the exterior was repeatedly stamped with a tool leaving random impressions. The stamping is rarely parallel and no examples of careful, intentional cross stamping have been observed. The lip is flattened and the rim



Plate 3. Pottery from Alligator Creek. A, Refuge Simple Stamped; B, Refuge Plain; C, Deptford Check Stamped; D, Deptford Geometric Stamped; E, Thom's Creek Finger Pinched.

profiles are straight. Vessel wall thickness ranges from 6 to 10 mm.

A small quantity of Refuge Random Punctate pottery was observed in the MackIntosh collection. The exterior surfaces of these sherds were randomly and irregularly punctated with pointed instruments. The punctations are spaced close together and are usually less than 3 mm in diameter. Stoltman (1974:276) and Peterson (1971a:156) have both suggested that a bundle or handful of sticks might have been used to produce this motif. These sticks or other punctation tools were held either vertical or at a slight angle to the vessel.

The definition of Refuge Plain is equally difficult because of the gradual transition from Thom's Creek to Deptford and the variation in paste which is found in the Early Woodland. In general, however, the paste became coarser from early to late in the Early Woodland. At Alligator Creek the Refuge Plain pottery was sorted on the basis of a paste similar to the simple stamped sherds described above (Plate 3b). In contrast, most of the Deptford Phase pottery is characterized by a hard, compact paste which contains numerous rounded coarse quartz grains with occasional very coarse inclusions. The Refuge Plain type accounts for 67% of the pottery from Alligator Creek. The category Refuge residual includes sherds too small or worn to accurately determine surface treatment.

In partial support of the typological continuum of the Refuge Series are the Refuge radiocarbon dates which overlap both the Thom's Creek and Deptford dates. The earliest Refuge date, collected from the base of the Refuge II site (Jasper County, South Carolina) is 1070 ± 115 B.C. (QC-784). The most recent date, 510 ± 100 B.C. (QC-785) is also from the Refuge II site and was collected about 70 cm above the strata from which the 1070 B.C. date was obtained (Lepionka 1979). These two dates bracket the majority of Refuge dates, which are in the eighth and ninth centuries B.C.

The Deptford Series was represented by only two sherds in the excavated collection (0.6% of the total collection) and 59 sherds from the surface collections (21.5% of the total surface collection). From its earliest description the Deptford Series has been characterized by a fine to coarse sandy paste and check stamped surface (Caldwell and Waring 1939). The Deptford pottery from Alligator Creek, as previously mentioned, exhibits considerable range in the temper, although most of the sherds have a paste with coarse, rounded quartz grains and occasional very coarse inclusions. A few of the specimens, primarily check stamped sherds, have a fine to medium sand paste.

Individuals, in attempts to discern temporally sensitive attributes of the Deptford check stamped types, have occasionally measured the check size (see Anderson et al. 1979:148). Milanich (1971:167) has suggested that such investigations are futile and that the "[s]ize and shape of checks may reflect manufacturing techniques rather than temporal differences." This variation has prompted some researchers to drop the word "bold" from the type description Deptford Bold Check Stamped, while maintaining the distinction between Deptford Check Stamped and Deptford Linear Check Stamped (see Milanich 1971:167, DePratter 1979:118, 123-125). Primary among the reasons for making this change is that the original distinction Waring made between fine checks (Oemler Check Stamped) and large checks (Deptford Bold Check Stamped) is no appropriate. Both the Deptford Linear Check Stamped and Check Stamped types have been

identified at Alligator Creek, although in small quantities (Plate 3c).

Also recovered from Alligator Creek are two sherds of the type Deptford Geometric Stamped (Plate 3d). This type designation follows the lead of Milanich (1971:169) and is identical to Waring's original type Oemler Complicated Stamped (Williams 1968:220, see also DePratter 1979:127-128). The stamp motif includes a herring bone pattern, small triangles (some with interior dots), large triangles filled with interior transverse lines, and concentric circles with lands radiating from the center to form a circular check pattern. All of these motifs appear to be elaborations on, or natural progressions from, the Deptford Check Stamped motif. This type does not include the surface treatment of curvilinear scroll patterns previously called Brewton Hill or Deptford Complicated Stamped, which represent local variations of Swift Creek Complicated Stamped.

The earliest date from the Deptford Series, 1240 ± 130 B.C. (RL-1034), has been obtained from a Lexington County, South Carolina site (Anderson 1979). The most recent Deptford date comes from St. Simons Island, Georgia. From Test E a date of A.D. 935 ± 70 (UM-673) was obtained (Martinez 1975), although this date may represent contamination by later Middle Woodland (Hanover) occupations.

The earliest pottery found at Alligator Creek is the Thom's Creek Series (Trinkley 1976). The Thom's Creek Plain type may be found with a variety of pastes. The two specimens from Alligator Creek have a paste characterized by abundant quantities of very coarse rounded quartz grains. Given the observed variation of Thom's Creek paste at sites such as Lighthouse Point and Stratton Place (Trinkley 1980b) it is possible that some plain sherds classified as either Refuge or Deptford may fall within the range of Thom's Creek.

Other Thom's Creek types found at Alligator Creek include Thom's Creek Reed Punctate and Thom's Creek Finger Pinched (Trinkley 1976). Both are easily recognizable and, at Alligator Creek, all are characterized by the very coarse paste previously described. The finger pinched type previously has been typed as Awendaw Finger Pinched, but to establish conformity within the Thom's Creek Series will be termed Thom's Creek Finger Pinched.

Several sherds from random later occupations were identified from the excavated material. The Deep Creek Series has been discussed by Phelps (1981) and dates at approximately the same time as the Deptford material. The Hanover Series was first typed by South (1960) and dates from the Middle Woodland (300 B.C. to A.D. 1000).

The only non-ceramic artifacts found at Alligator Creek are two projectile points and a single baked clay object. The two points are both made from crudely retouched flakes of a yellowish ortho-quartzite. Neither point readily fits into any previously described Carolina type. One has a roughly lanceolate shape and had received considerable pressure flaking, primarily on one side. The second point is a small short stemmed specimen which generally fits the category previously described by Trinkley (1980a). The clay object is roughly circular to oval with a central punctation completely penetrating the disk and a number of other reed jab punctations. The specimen is made from a clay paste similar to both the Thom's Creek and Deptford pottery. The object is similar to a number of other baked clay objects found along the north Charleston coast and usually found associated with Early Woodland occupations.

SUMMARY

This preliminary investigation of Alligator Creek has provided several significant insights concerning interior coastal nonshell midden sites. Primary among these insights is the extent of leaching and the necessity to open larger excavation units in an attempt to distinguish even vague stains which may be cultural in origin. The lack of feature, charcoal, and bone preservation is discouraging, although similar situations have been found on the fall line (Trinkley 1980a), at the Palm Tree site in Berkeley County (Widmer 1976) and at the Honey Hill site in Charleston County (Trisha Logan, personal communication). While these interior sites appear to represent a distinct aspect of a much broader settlement and subsistence pattern their integrity will make it difficult to fully explain the observed cultural system.

At present the data from Alligator Creek suggest that the site was used sporadically as an Early Woodland camp. While features were probably present in this excavation sample, their function, distribution, and number remain in doubt. The only abundant non-perishable artifact discarded at the site was pottery. There is a near absence of stone tools or waste flakes (both primary and secondary retouch). Likewise, only one baked clay object (presumably associated with cooking) has been recovered. This artifact assemblage, while suggestive of some degree of domestic or processing activities, does not strongly suggest the function of hunting or processing of animal meat. Of course, some coastal populations, such as at Lighthouse Point, apparently subsisted on quantities of animal meat while relying on little stone. At these sites bone and antler tools are common and are preserved by the same alkaline soil conditions which have preserved the food bone. Consequently, the absence of stone tools at Alligator Creek may be explained by the use of bone tools, and the absence of both food bone and bone tools may be the result of the acidic sandy soils. The possibility of plant food processing must also remain in doubt until further investigations produce a reliable sample of ethnobotanical remains.

Alligator Creek has produced a significant collection of primarily Refuge Series pottery and this site provides the first opportunity to examine a Refuge Phase assemblage from this portion of the South Carolina coast. The results of the pottery analysis may assist in better understanding the Early Woodland ceramic continuum. While no stratigraphic separation has been discovered it is possible that future work will provide this information. It is probable, however, that the site evidences better horizontal stratigraphy than vertical separation.

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